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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/134,771	08/12/98	SAH	D 860098.425

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EXAMINER	
KAUSHAL,S	
ART UNIT	**PAPER NUMBER**
1633	7

DATE MAILED: 03/16/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/134,771	Applicant(s) SAH et al
	Examiner SUMESH KAUSHAL	Group Art Unit 1633

☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is clos d** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) *1-15, 23, and 24* is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-15, 23, and 24* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

DETAILED ACTION

The instant application claims priority to its filing date 08/12/98. Applicant's election of Group-I, claims 1-15, 23-24 in Paper No. 6, 02/18/00 has been acknowledged. Claims 16-22 are withdrawn. Claims 1-15, 23-24 have been examined.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, 6-8 and 23, recites the limitation "conditionally-immortalized" cell in line 1. It is not clear what is "conditionally-immortalized" in this context.

The claim 1 is indefinite because it is not clear what are 'first growth medium and second growth medium". The claim fails to identify what constitute first and second growth medium.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-15 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hosimaru et al (PNAS. 93:1518-1523, 1996) and Prasad et al (In Vitro. Cell Dev. 30A:596-603, 1994) in view of Boss et al (US 5411883, 1995) and Gallyas et al (Neurochem. Res. 22(5):569-575, 1997).

Hosimaru et al teaches immortalized rat neuronal progenitor cells wherein the expression of v-myc oncogene is driven by a tetracycline-controlled trnsactivator and a human cytomegalovirus (CMV) promoter. The cited art teaches that the cells were first cultured in a serum supplemented media follow by culturing in serum free media containing growth factors. Hosimaru et al teaches the culturing and selection of the cells onto polyornithine/laminin-coated tissue culture plates. In addition, Hosimaru et al further teaches that presence of severa cytokine, or forskolin or growth factors on a specific substrate is required for the differentiation of immortalized neuronal precursor cells (page 1518, abstract; page 1519, col.1. para.3; page 1522, col.1, para.2).

Prasad et teaches the isolation of an immortalized dopamine-producing nerve cell line derived from fetal rat mesencephalic tissue transfected with an oncogene (see abstract).

Hosimaru et al and Prasad et al do not teach the immortalization of a human neuronal precursor cell, wherein the cell is capable of differentiating into a dopaminergic and/or GABA-ergic neurons

Boss et al teaches the isolation and culture methods for the proliferation of human mesencephalon neuron progenitor cells, wherein the cultured neuronal cells differentiate to produce dopamine-producing cells (see abstract; col.6, line 33; col.9-10, table 1-3; col.20 line 60).

Gallyas et al teaches the characterization of mouse immortalized neuronal cell lines by measuring the concentration of various neurotransmitters, like GABAergic and dopamine (see abstract; page 570, col.2, para 3; page 571, table-I, fig-1; page 572, table-II).

It would have been obvious to one ordinary skill in the art at the time the invention was made to substitute the immortalized rat neuronal progenitor cells as taught by Hosimaru et al and Prasad et al with human mesencephalon neuron progenitors cells as taught by Boss et al. It would have been further obvious to characterize immortalized human mesencephalon cells as taught by Gallyas et al because dopamine and GABA are neurotransmitter of interest. One would have been motivated to make immortalized human neuronal progenitor cells wherein the expression of v-myc oncogene is driven by tetracycline-controlled trnsactivator because the suppression of v-myc oncogene in an immortalized progenitor induces the differentiation of the neuronal progenitor cell. One would have been motivated make immortalized human neuronal progenitor cells because the human neuronal cells would have been useful in the study of neurotransmitters and neuron cell differentiation.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sumesh Kaushal Ph.D. whose telephone number is (703) 305-6838. The examiner can normally be reached on Monday-Friday from 8:00 AM to 4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor John L. LeGuyader can be reached on (703) 308-0447. The fax phone number for the organization where this application or proceeding is assigned as (703) 308-2035. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 308-0196.

S. Kaushal, AU 1633

DEBORAH J. CLARK
PATENT EXAMINER